



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/680,930	10/07/2003	Viraj Chatterjee	07844/613001/P566	7598
21876 7590 09/02/2008 FISH & RICHARDSON P.C. P.O. Box 1022 MINNEAPOLIS, MN 55440-1022				
EXAMINER				
NGUYEN, KEVIN M				
ART UNIT		PAPER NUMBER		
2629				
MAIL DATE		DELIVERY MODE		
09/02/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/680,930  
Filing Date: October 07, 2003  
Appellant(s): CHATTERJEE ET AL.

---

William E. Hunter  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed June 12, 2008 appealing from the Office action mailed October 29, 2007.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

5,488,385	SINGHAL ET AL.	1-1996
7,010,551	TERAYAMA ET AL.	3-2006
6,956,542	OKULEY ET AL.	10-2005

7,102,591	SHIH	9-2006
5,917,480	TAFOYA ET AL.	6-1999
5,859,623	MEYN ET AL.	1-1999

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. **Claims 1, 18, 35-39, 48 and 49** are rejected under 35 U.S.C. 102(b) as being anticipated by Singhal et al (US 5,488,385, hereinafter Singhal).

3. As to **claim 1**, Singhal discloses a method comprising:

identifying, by a software application (a software executed by a processor 12) in a computer system, display characteristics of multiple display devices (CRT and LCD), col. 5, lines 47-60; and

generating, by the software application in the computer system, simultaneous independent views of an electronic document (at least a file in a notebook computer) on the display devices by separately rendering the electronic document to each of display devices based on the identified display characteristics (desired resolution and color depth) of the device as discussed in col. 5, lines 40-60, and col. 6, lines 30-40.

4. The limitation of claim 18 is similar to those of claim 1, though in a software product tangibly embodied in a machine-readable medium (a memory 56) form, therefore the rejection of claim 18, will be treated using the same rationale as claim 1
5. As to claim 35, Singhal discloses a system comprising: one or more peripheral display devices (CRT and LCD); and a data processing system comprising a primary device and a software application (a software executed by a processor 12) that generates simultaneous independent views of an electronic document (at least a file in the notebook computer) on the display devices based display characteristics (desired resolution and color depth) of the display device as identified by the software application, fig. 4, col. 5, lines 40-60, and col. 6, lines 30-40.

As to claim 36, Singhal teaches display buffers (the frame buffer 58) associated with the display device (CRT and LCD), fig. 4, col. 6, lines 50-60, wherein the software application (a software executed by CPU 12) comprises a display engine (a video controller 50) that concurrently (simultaneously) renders the electronic document multiple times (multiple CRT(s) and multiple LCD(s), fig. 4) , col. 5, lines 41-60.

As to claim 37, Singhal teaches wherein the software application identifies the display devices (CRT, LCD) that are currently interfaced with the data processing system (a notebook computer) by the registers that establish the display mode, text mode and graphic mode by interface hardware (the input device), col. 5, lines 34-40.

Claim 38 shares the same limitations as those of claim 8 and therefore the rationale for rejection will be the same.

As to claim 39, Singhal discloses a 640x480 pixel resolution LCD panel 52 as a primary display device less than display capability than a high-resolution CRT display 54 as a secondary display device, col. 5, lines 47-51.

6. The limitation of **claim 48** is similar to those of claim 35, though in a software-application-means (a software application executed by the processor 12), therefore the rejection of claim 18, will be treated using the same rationale as claim 35, col. 5, lines 51-60, and col. 6, lines 2-5.

7. As to claim 49, Singhal teaches soft-application-means for controlling the outputting software-application means based on user configuration, col. 5, lines 51-60.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 2-8, 11, 19-25, 28, 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Terayama et al (US 7,010,551, hereinafter Terayama).

As to claim 2, Singhal discloses all of the claimed limitation of claim 1, except wherein generating the independent views comprises separately rendering the electronic document according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the content based upon assigned device types of the display devices. As modified by Terayama reference, figure 3A of Terayama teaches a plurality of pieces of data displayable on a display unit and with a start and

an end of each piece of data indicated by respective identifiers in the form of tags, data displayable on a limited-capability device, col. 17, line 67 through col. 18, line 3.

10. As to claim 3, Singhal teaches a display subsystem providing for the simultaneous redisplay of independent images, col. 13, lines 50-51.

11. As to claim 4, Terayama teaches the tag AA associated with the content (window 200) based on user input, fig. 16.

12. As to claim 5, Singhal teaches two video images are independently, separately displayed on two CRT and LCD.

13. As to claim 6, Terayama teaches the window 200 comprising an annotation (a text is inputted by a keyboard), fig. 16.

14. As to claim 7, Singhal teaches identifying the display characteristic comprise periodically obtaining display characteristics (identifying and redisplaying display characteristics, col. 13, lines 50-51).

15. As to claim 8, Singhal teaches wherein obtaining the display characteristics comprises obtaining screen resolution and color depth information of the multiple display devices, as discussed in col. 6, lines 2-5

16. As to claim 11, Singhal teaches the resolution of the image of CRT is different than the resolution of the image of LCD.

17. Claim 19 shares the same limitations as those of claim 2 and therefore the rationale for rejection will be the same.

18. Claim 20 shares the same limitations as those of claim 3 and therefore the rationale for rejection will be the same.

19. Claim 21 shares the same limitations as those of claim 4 and therefore the rationale for rejection will be the same.
20. Claim 22 shares the same limitations as those of claim 5 and therefore the rationale for rejection will be the same.
21. Claim 23 shares the same limitations as those of claim 6 and therefore the rationale for rejection will be the same.
22. Claim 24 shares the same limitations as those of claim 7 and therefore the rationale for rejection will be the same.
23. Claim 25 shares the same limitations as those of claim 8 and therefore the rationale for rejection will be the same.
24. Claim 28 shares the same limitations as those of claim 11 and therefore the rationale for rejection will be the same.
25. Claim 41 shares the same limitations as those of claim 2 and therefore the rationale for rejection will be the same.
26. Claim 42 shares the same limitations as those of claim 5 and therefore the rationale for rejection will be the same.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have combined Terayama into Singhal to create the claimed invention. It would have been obvious to modify Singhal to have the plurality of pieces of data displayable on the display unit and with a start and an end of each piece of data indicated by respective identifiers in the form of tags, data displayable on the limited-capability device as taught by Terayama because this would improve the diversified images being displayed on different types



of a plurality of display devices without reorganizing the extracted data in a size and format (see Terayama, col. 1, lines 41-56).

27. Claims 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Okuley et al (US 6,956,542, hereinafter Okuley).

28. As to claim 46, Singhal discloses a system comprising: one or more peripheral display devices (CRT and LCD); and a data processing system comprising a primary display device and a software application (a software executed by processor 12) that generates simultaneous independent views of an electronic document (at least a file in the notebook computer) on the display devices based on display characteristics (desired resolution and color depth) of the display device as identified by the software application, wherein a primary view from the independent views includes rendered content not included in a secondary view from the independent views, and the primary view includes at least a portion of a user interface that provides control over the independent views on the display devices both together and separately, and the secondary view forms part of a presentation in figure 3a, col. 5, lines 14-18, and lines 40-60, and col. 6, lines 2-5. Singhal fails to teach a primary display device and a secondary display device. As modified by Okuley reference, Okuley teaches a primary display device 305, and secondary display device 350, fig. 3.

29. As to claim 47, Singhal teaches display buffers (the frame buffer 58) including two independent images CRT and LCD, fig. 4, col. 6, lines 50-60. The software application software executed by CPU 12), a display engine (video controller 50), col. 5, lines 41-60.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Singhal to have a primary display device 305, and secondary

display device 350 as taught by Okuley, because this would provide PC users may enjoy the benefits of both worlds with a single device, col. 5, lines 34-35 of Okuley.

30. Claims 9, 10, 12-15, 26, 27, 29, 31, 32 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Shih (US 7,102,591).

As to claim 9, Singhal discloses a 640x480 pixel resolution LCD panel 52 as a primary display device less than display capability than a high-resolution CRT display 54 as a secondary display device, col. 5, lines 47-51.

As to claim 10, Singhal teaches all of the claimed limitation except for a primary display comprising a monochrome display device that present the first view without color, and a second display device comprising a full-color display device that presents the second view with full color. As modified by Shih reference, Shih teaches a system comprising a PDA 10 as a primary display device and a TV as a second display device. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the PDA display device being displayed without color, and the TV being displayed image with full color, col. 2, lines 37-41.

As to claim 12, Singhal teaches a notebook computer inherent an input device as a user interface that controls over the video information as the electronic document being displayed independently, both together and separately, col. 4, lines 59.

As to claim 13, Shih teaches a page changing output (step 609) as the projector being utilized during presentation.

As to claim 14, Singhal discloses three display devices, fig. 1

31. As to claim 15, Singhal second video information view includes additional rendered content not included in the first video information view (two video information views are displayed independently, both together and separately, abstract).
32. Claim 26 shares the same limitations as those of claim 9 and therefore the rationale for rejection will be the same.
33. Claim 27 shares the same limitations as those of claim 10 and therefore the rationale for rejection will be the same.
34. Claim 29 shares the same limitations as those of claim 12 and therefore the rationale for rejection will be the same.
35. Claim 31 shares the same limitations as those of claim 14 and therefore the rationale for rejection will be the same.
36. Claim 32 shares the same limitations as those of claim 15 and therefore the rationale for rejection will be the same.
37. Claim 40 shares the same limitations as those of claim 10 and therefore the rationale for rejection will be the same.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Singhal to have the PDA as taught by Shih. The motivation for doing so would apply a variety of electronic display devices, and provide unlimited function of the build-in CPU and related software is practical for displaying not only for a still image, but also for displaying a moving picture, col. 1, lines 33-38 of Shih.

38. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Terayama as applied to claim 35 above, and further in view of Tafoya et al (US 5,917,480, hereinafter Tafoya).

The combination of Singhal and Terayama teaches all of the claimed limitation, except for slide show presentation. As modified by Tafoya reference, Tafoya teaches multiple display devices including a slide show presentation 72, fig. 2A, col. 10, lines 40-56. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Singhal and Terayama to have the slide-show mode as taught by Tafoya, because this would provide an easy-to-use user interface, col. 10, lines 51-52 of Tafoya.

39. Claim 44-45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Terayama in view of Tafoya et al as applied to claim 35 above, and further in view of Meyn et al (US 5,859,623, hereinafter Meyn).

The combination of Singhal, Terayama, and Tofoya teaches all of the claimed limitation, except wherein the electronic document comprises an electronic in a predetermined final format that defines an appearance of the electronic document, and wherein the predetermined final format comprises PDF. As modified by Meyn reference, Meyn teaches an electronic document comprising PDF as discussed in col. 10, lines 49-67.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Singhal, Terayama, and Tofoya to have the predetermined final format comprises PDF as taught by Meyn because this would improve the quality of the image being displayed without requiring the separate computer and cables (see Meyn, col. 1, lines 53-63).

40. Claims 13, 16, 17, 30, 33 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Singhal in view of Shih as applied to claims 1 and 18 above, and further in view of Meyn et al (US 5,859,623, hereinafter Meyn).

As to claims 13, 16 and 17, the combination of Singhal and Shih teaches all of the claimed limitation, except wherein the electronic document comprises an electronic in a predetermined final format that defines an appearance of the electronic document, and wherein the predetermined final format comprises PDF. As modified by Meyn reference, Meyn teaches an electronic document comprising PDF as discussed in col. 10, lines 49-67.

41. Claim 30 shares the same limitations as those of claim 13 and therefore the rationale for rejection will be the same.

42. Claim 33 shares the same limitations as those of claim 16 and therefore the rationale for rejection will be the same.

43. Claim 34 shares the same limitations as those of claim 17 and therefore the rationale for rejection will be the same.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Singhal and Shih to have the predetermined final format comprises PDF as taught by Meyn because this would improve the quality of the image being displayed without requiring the separate computer and cables (see Meyn, col. 1, lines 53-63).

#### **(10) Response to Argument**

Claim 1 recited “a method comprising: identifying, by a software application in a computing system, display characteristics of multiple display devices; and generating, by the software application in the computing system, simultaneous independent views of an electronic

document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.”

Appellant contends with respect to claim 1 that "Singhal fails to disclose or suggest limitation “identifying, by a software application in a computer system, display characteristics of multiple display devices.”

Appellant alleges with respect to claim 1 that Singhal fails to disclose limitation “generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.”

These are not found persuasive for the following reasons: the examiner respectfully disagrees.

First, Principles of Law.

When the interpretation of the claim(s) is or may be in dispute, i.e., given one interpretation, a rejection under 35 U.S.C. 102 is appropriate and given another interpretation, a rejection under 35 U.S.C. 103(a) is appropriate.

When the reference discloses all the limitations of a claim except a property or function, and the examiner cannot determine whether or not the reference inherently possesses properties which anticipate or render obvious the claimed invention but has basis for shifting the burden of proof to applicant as *In re Fitzgerald*, 619 F.2d 67, 205 USPQ 594 (CCPA 1980).

Second, Singhal teaches that in order to display the electronic data file in the LCD display device 52 and the CRT display device 54, the computing system 43 has to identify/recognize the characteristics of the LCD display device 52 and the CRT display device 54 (i.e., VESA standard resolution devices including a 640 by 480 pixel resolution STN LCD panel 52 and a conventional high-resolution CRT display 54) using control data program by the CPU 12 or processor 12 (software application). Col. 5, lines 47-53; fig. 3a.

Third, Singhal teaches that “[d]epending on the control software executed by the processor 12 in management of the video display sub-system 32, two banks of scratch/control data storage area may be utilized in support of the respective configurations desired for the display devices 52, 54. Each bank is identified by a unique set of I/O address to the processor 12.” (Col. 5, lines 55-61; Fig. 3a.)

As the result, Singhal does disclose limitations “identifying, by a software application in a computing system, display characteristics of multiple display devices; and generating, by the software application in the computing system, simultaneous independent views of an electronic document on the display devices by separately rendering the electronic document to each of the display devices based on the identified display characteristics of the device.”

Therefore, the teaching of Singhal does anticipate the device and method of the instant claim 1, and the rejection of claim 1 is maintained.

With respect to claims 18, 35, 46 and 48, the features of claims 18, 35, 46 and 48 are similar to the independent claim 1. Therefore, the responses to appellant’s argument with respect to claims 18, 35, 46 and 48 are the same as the response with respect to claim 1.

Appellant alleges with respect to claim 37 that Singhal fails to disclose limitation “the software application identifies the display devices that are currently interfaced with the data processing system by periodically polling display interface hardware.” These are not found persuasive for the following reasons: the examiner respectfully disagrees. Singhal teaches that “depending on the control software executed by the processor 12 in management of the video display sub-system 32, two banks of scratch/control data storage area may be utilized in support of the respective configurations desired for the display devices 52, 54. Each bank is identified by a unique set of I/O address to the processor 12.” (Col. 5, lines 55-61; Fig. 3a.)

Appellant alleges with respect to claim 49 that Singhal fails to disclose limitation “software-application-means for controlling the outputting software-application-means based on user configuration.” These are not found persuasive for the following reasons: the examiner respectfully disagrees. In the alternate embodiment, Singhal teaches that a laptop, col. 4, line 59, is inherently included the laptop keyboard or the pointing device as the user interface for the user controls the different displays.

Appellant alleges with respect to claim 2 that Singhal fails to disclose limitation “generating the independent views comprises separately rendering the electronic document according to presentation tags associated with content in the electronic document, the presentation tags indicating device-dependent rendering to be applied to the content based upon assigned device types of the display devices.” These are not found persuasive for the following reasons: the examiner respectfully disagrees. Figure 3A of Terayama teaches a plurality of pieces of data displayable on a display unit and with a start and an end of each piece of data indicated



by respective identifiers in the form of tags, data displayable on a limited-capability device. See col. 17, line 67 through col. 18, line 3.

With respect to claim 3, Appellant contends that Singhal fails to provide teaching or suggestion for limitation “wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices.” Appellant contends that Terayama fails to provide teaching or suggestion for limitation “in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.” Thus, the combine teachings of Singhal and Terayama do not render the apparatus of the instant claims *prima facie* obvious.

These are not found persuasive for the following reasons: the examiner respectfully disagrees. First, Singhal teaches “a display subsystem providing for the simultaneous redisplay of independent images to multiple independent display devices.” Col. 13, lines 50-52. Second, Terayama discloses “[a]lthough the Web pages provided over the Internet are written in the HTML, their formats are diversified. Specifically, the contents provided by the servers are varied in HTML document structure from server to server. The user is forced to use different extraction methods and different shaping methods from content to content to reorganize the data for the mobile terminal.” Col. 1, lines 50-56. As the result, the combine teaching of Singhal and Terayama render disclose limitations “wherein identifying the display characteristics comprises periodically re-identifying the display characteristics of the display devices, in conjunction with multiple iterations of the separate renderings of the electronic document to allow display devices to be added and removed dynamically.”

Appellant alleges with respect to claim 12 that Singhal fails to disclose limitation “generating the independent views of the electronic document comprises generating a user interface with the first view that provides control over the independent views on the display devices both together and separately.” The examiner respectfully disagrees. Singhal further teaches that “[i]n the preferred embodiments, where independent images are to be simultaneously displayed, the frame data for the separate display devices 52 and 54 is stored in an interleaved or alternating series of data storage locations.” Col. 6, lines 35-39.

Appellant alleges with respect to claim 43 that Tafoya fails to disclose limitation “the primary view includes at least a portion of a user interface that provides control over the independent views on the display devices both together and separately, and the secondary view forms part of a slide show presentation.” The examiner respectfully disagrees. Tafoya discloses the deficiencies of Singhal and Terayama that “[i]n addition to the control items 75a through 75n, the edit-mode control window 74 includes a viewing field 78. The user may select among four different editing modes: slide-view, outline-view, slide-sorter, and notes-view. Each editing mode corresponds to a different display of information within the viewing field 78 of the edit-mode control window 74.” Col. 13, lines 42-49; Fig. 2A. Tafoya further teaches “[t]he first action items slide is automatically entitled “Action Items” and subsequent action items slides are entitled “Action Items (continued).” Action items associated with different slides are included on the action items slides as separate topic items. In addition, multiple action items may be associated with a single slide. In this case, each data string up to a carriage return is included on an action items slide as a separate topic item.” Col. 16, lines 39-47.

With respect to claim 44 and 45, Meyn teaches the deficiencies of Singhal, Terayama and Tafoya that the prepared final form for presentation documents using PDF files of Adobe Acrobat software application.

With respect to claims 13, 16, 17, 30, 33 and 34, Meyn teaches the deficiencies of Singhal and Shih that “both of the projectors 12 and 14 can function simultaneously to display two different images, where desired. Col. 5, lines 51-52. Meyn teaches “DPF information is compressed so that large presentations, such as slide presentations developed by the personal computer 21.” Col. 4, lines 44-46.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner’s answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/KEVIN M. NGUYEN/

Primary Examiner, Art Unit 2629

Conferees:

/Bipin Shalwala/

Supervisory Patent Examiner, Art Unit 2629

/Richard Hjerpe/

Supervisory Patent Examiner, Art Unit 2629

